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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/711,841	10/08/2004	G. R. Mohan Rao	A4-1845	5840
27127 7590 06/02/2008 HARTMAN & HARTMAN, P.C. 552 EAST 700 NORTH VALPARAISO, IN 46383				
EXAMINER LE, THONG QUOC				
ART UNIT 2827		PAPER NUMBER		
NOTIFICATION DATE 06/02/2008		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

domenica@hartmaniplaw.com  
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# Office Action Summary

## Application No.

10/711,841

## Applicant(s)

RAO ET AL.

## Examiner

/Thong Q. Le/

## Art Unit

2827

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 01 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1,3-5,7-21,23-28 and 30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1,3-5,7-8,11-21,23-28,30 is/are allowed.
- 6) ☒ Claim(s) 9 and 10 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

1. Amendment filed on 05/01/2008 has been entered.
2. Claims 1, 3-5, 7-21, 23-28, 30 are presented for examination.

### *Response to Arguments*

3. Applicant's arguments filed 05/01/2008 have been fully considered but they are not persuasive.

Regarding claims 9-10, these claims are rejected based on Yamazaki Pub. U.S. 2004/0165472 .

The applicant's argument for these claims is improper:

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data from a different page are requested. However, nowhere in this paragraph is there any reference to keeping multiple pages open on the same bank.

The paragraph [0328] of Yamazaki discloses in the page mode operation, the page in bank of memory can be kept opening.

[0328] According to the third embodiment of the invention, as described above, the page mode operation can be performed in each bank, and the page can be kept open in each bank so that it is possible to increase the page mode operation period and to reduce the average power consumption.

As described above, the control circuit in Figure 36 clearly comprises a means for keeping pages open in a bank of memory. Hence the rejection of claims 9-10 based on Yamazaki still stands.

***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

6. Claims 9-10 are rejected under 35 U.S.C. 102(e) as being anticipated by Yamazaki (Pub. U.S. Patent No. 2004/0165472).

Regarding claims 9-10, Yamazaki discloses a semiconductor memory device (Figure 2) comprising a bank with multiple pages (Figure 2, 10), the device comprising means (page mode) (Figure 3, REPM, KEEP PAGE OPEN) for keeping multiple pages open ([0328], opened page maintained open) on the bank, wherein the keeping means comprises latches coupled to a sense amplifier ([0345], [0349]) associated with the bank, the latches operating in the storage of data read-from and written-to the sense amplifier (Figure 5, SA, [0347]), wherein the device is a nonvolatile memory device

([0384]) with multiple pages open in a block or sector thereof, and wherein the device is a flash memory device ([0384]).

***Allowable Subject Matter***

5. Claims 1,3-5,7-8,11-21,23-28,30 are allowed.

Claims 1,3-5,7-8,11-21,23-28,30 include allowable subject matter since the prior art made of record and considered pertinent to the applicant's disclosure does not teach or suggest the claimed limitations. The prior art does not teach the claimed invention having a semiconductor memory device comprising a bank with multiple pages, the device comprising means for keeping multiple pages open on the bank, wherein the keeping means comprises latches coupled to a sense amplifier associated with the bank, wherein the keeping means is operative to post a precharge command immediately after a command for a first access of one of the multiple pages in anticipation of a subsequent access of the page, the keeping means keeping the page open for a number of clock cycles and the precharge command causing a precharge operation to be executed after completion of the number of clock cycles, the latches operating in the storage of data read-from and written-to the sense amplifier.

***Conclusion***

6. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to /Thong Q. Le/ whose telephone number is 571-272-1783. The examiner can normally be reached on 8:00am-5:00pm M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zarabian Amir can be reached on 571-272-1852. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Thong Q. Le/  
Primary Examiner  
Art Unit 2827

5/27/2008